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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,843	09/17/2003	Shigekazu Zen	Q77444	2852
23373 7590 06/04/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER PAK, JOHN D	
			ART UNIT 1616	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/663,843

Applicant(s)

ZEN, SHIGEKAZU

Examiner

JOHN PAK

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/12/2007 has been entered.

Claims 1, 4, 6-7 and 10 are pending in this application.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (US 5,389,300) in view of DE 4142134, WO 96/01047 and JPAB abstract JP401019004A.

Schmitt et al. disclose formulations for protecting sawn timber against fungi and insects (column 1, lines 4-6; column 3, lines 27-32). In addition to o-phenylphenol and iodopropargyl derivatives as active ingredients, pyrethroids are disclosed to be used together to increase the spectrum of action or achieve specific effects (column 4, lines

38-45; claim 1). Specifically disclosed pyrethroids include cyhalothrin, cypermethrin, permethrin and deltamethrin¹ (id.). The pyrethroids can be used at a concentration range of 0.001 to 10 wt% (column 4, lines 51-53). The formulation is prepared by dissolving the active compounds in a solvent, with auxiliaries such as emulsifiers (column 2, lines 61-66). Polar organochemical solvents such as benzoic acid esters, butyl benzoate in particular, are specifically disclosed as suitable solvents (column 3, lines 9-12). Suitable emulsifiers include nonionic and anionic surface active agents (column 3, lines 17-26). Solvent amount in the concentrate formulation is at least 20 wt% (column 4, line 54; column 5, lines 8-25). Surfactant concentration is about 5-25 wt% (see claim 3 and column 5, lines 4-25). Concentrated emulsions are disclosed (column 2, lines 41-44).

DE 4142134 discloses cypermethrin and permethrin for protection of wood against termites (translation page 4). Synergistic activity against termites is taught for cypermethrin + permethrin (translation page 4, see from line 13 to end of page). Use with polar organochemical solvents such as ester solvents is taught (translation page 7, lines 7-10). Use of emulsifiers and wetting agents are taught (translation page 9, last two paragraphs).

¹ These pyrethroids have structures that fall within Appellant's formulae in claim 4.

WO 96/01047² discloses emulsifiable concentrates containing one or more pesticidal active ingredients, a solvent selected from the class of esters and other categories, and an emulsifying surfactant system (see English abstract). The pesticidal ingredient includes pyrethroids (see translation of page 1, lines 22-24). The ester solvents include benzoic acid esters, including butyl benzoate (see translation of page 3, lines 7-23).

JPAB abstract JP401019004A discloses methyl benzoate and ethyl benzoate to have multiple pesticidal properties, including insecticidal properties.

The difference between the claimed invention and the primary reference by Schmitt et al. is that Schmitt et al. do not explicitly exemplify a combination of a pyrethroid, surfactant, and an aromatic solvent such as the specific benzoates, ethyl phenylpropionate and ethyl phenylacetate, which are now recited in the claims.

However, benzoic acid esters and butyl benzoate are particularly pointed out by Schmitt et al. as suitable solvents (column 3, line 12) and numerous pyrethroids are claimed as part of Schmitt's composition (see claim 1, column 8, lines 23-30). Schmitt et al. provide the suggestion to add said pyrethroids for the purpose of increasing the spectrum of action or to achieve specific effects, i.e. further protect the wood against insects (column 3, lines 27-32). The secondary reference provide additional motivation to utilize cypermethrin and permethrin by disclosing advantages in wood protection

² Submitted by applicant in the IDS of 5/26/2004.

against wood damaging termites. One having ordinary skill in the art would therefore have been amply motivated to further protect Schmitt's sawn timber against insect damage by including one or more pyrethroid insecticide.

Applicant's formulation, "pesticidal emulsifiable concentrate" is disclosed and suggested by Schmitt et al. The definition of pesticidal emulsifiable concentrate is given by applicant as "normally composed of a pesticidal active ingredient compound, a surfactant and an organic solvent." (specification page 1, lines 11-13). Schmitt et al. clearly disclose such a formulation type in that the corresponding ingredients are all disclosed in claim-recited concentration amounts, wherein concentrated emulsions are disclosed (column 2, lines 41-44).

The exact claimed benzoic acid esters are not expressly disclosed by Schmitt et al. However, use of benzoic acid esters with pyrethroids in emulsifiable concentrate form is well known (Schmitt et al., WO 96/01047) and Schmitt et al. exemplify butyl benzoate. Further selection of methyl or ethyl benzoate would have been suggested from their expected advantage of providing additional pesticidal activity. Selection of a suggested solvent that also has insecticidal activity would have been sufficient motivation to arrive at methyl or ethyl benzoate.

To date, no objective evidence of nonobviousness has been provided with respect to the amended subject matter that remains in the claims.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the combined teachings of the cited references.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'John Pak', is positioned above the printed name.

John Pak
Primary Examiner
Technology Center 1600